



FACILITY COMPLIANCE INSPECTION REPORT

Division of Waste Management Solid Waste Section

UNIT TYPE:										
Lined MSWLF		LCID		YW		Transfer		Compost		COUNTY: CATAWBA PERMIT NO.: 18-09 FILE TYPE: COMPLIANCE
Closed MSWLF		HHW		White goods		Incineration		T&P		
CDFL		Tire T&P / Collection		Tire Monofill		Industrial Landfill	X	DEMO		

Date of Site Inspection: 2/20/2014 and 3/7/2014 **Date of Last Inspection:** 6/19/2012

FACILITY NAME AND ADDRESS:

Duke Energy Carolinas, LLC - Marshall Steam Station
 Flue Gas Desulfurization (FGD) Residue Landfill
 8320 East NC Highway 150
 Terrell, North Carolina 28682

GPS COORDINATES: N: 35.60463 W: -80.9774

FACILITY CONTACT NAME AND PHONE NUMBER:

George Tolbert, EHS
 Duke Energy Carolinas, LLC
 (828) 478-7820
George.Tolbert@duke-energy.com

FACILITY CONTACT ADDRESS:

Registered Agent: CT Corporation System
 150 Fayetteville Street, Box 1011
 Raleigh, NC 27601

Principal Office: Duke Energy Carolinas, LLC
 526 South Church Street
 Charlotte, NC 28202-1904

PARTICIPANTS:

George Tolbert, EHS - Duke Energy Carolinas, LLC
 Kimberlee Hutchinson, PE – Duke Energy Environmental Services
 Sherrie Christopher, Contract Resource Coordinator - Duke Energy Carolinas, LLC
 Scott Parks, System Manager - Duke Energy Carolinas, LLC
 Deb Aja, NCDENR Solid Waste Section

STATUS OF PERMIT:

Active.

INDUSTRIAL WASTE LANDFILL FACILITY: PERMIT NO. 18-09	ISSUANCE DATE
Original Permit to Construct	April 12, 2006
Modification PTC: HDPE Liner and Cap System	May 22, 2006
Permit to Operate: Phase I, Cell 1	November 21, 2006
Permit to Operate: Amendment – Five (5) Year Renewal	May 18, 2012
Permit to Operate: Modification, Chimney Drains	December 6, 2013

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 2 of 5

PURPOSE OF SITE VISIT:

Comprehensive Inspection - Inspection of operations conducted on 2/20/2014 and inspection of records conducted on 3/7/2014.

STATUS OF PAST NOTED VIOLATIONS:

None.

OBSERVED VIOLATIONS:

1. 15A NCAC 13B .0203(d) states: "By receiving solid waste at a permitted facility, the permittee(s) shall be considered to have accepted the conditions of the permit and shall comply with the conditions of the permit."

General Permit Condition Number 6 states:

"Operation of this solid waste management facility must be in accordance with the Solid Waste Management Rules, 15A NCAC 13B, Article 9 of the Chapter 130A of the North Carolina General Statutes (NCGS 130A-290, et seq.), the conditions contained in this permit; and the approved plan. Should the approved plan and the rules conflict, the Solid Waste Management Rules shall take precedence unless specifically addressed by permit condition."

The approved Operations Plan dated November 13, 2013, *Section 2.3.1 LCS Maintenance*, states in part:

"LCS pipes will be cleaned out by the use of a clean-out snake or high-pressure water flushing at least once a year, and the LCS piping will remote-camera monitored if cleaning indicates a blockage in the leachate collection system pipes."

On March 7, 2014, leachate collection system pipes were in the process of being cleaned and remote-camera monitored. The previous high-pressure water flushing was performed on 10/18/2012 and 10/19/2012 (no defects were noted). The leachate collection system pipes had not been cleaned out in 2013 and thus had not been cleaned out at least once a year. This constitutes a violation of 15A NCAC 13B .0203(d).

To correct this violation and be in compliance with 15A NCAC 13B .0203(d), ensure that leachate collection system pipes are cleaned out in accordance with the approved Operations Plan. Please submit an electronic version of the report for the March 7, 2014 clean-out to Deborah Aja at deborah.aja@ncdenr.gov within seven (7) days of receipt of the report.

The Operations Plan also states the frequency of clean-out and camera inspections may be modified based on consecutive inspection results and observed operating conditions. Please contact Larry Frost, Regional Permitting Engineer, to make any modifications.

The item(s) listed above were observed by Section staff and require action on behalf of the facility in order to come into or maintain compliance with the Statutes, Rules, and/or other regulatory requirements applicable to this facility. Be advised that pursuant to N.C.G.S. 130A-22, an administrative penalty of up to \$15,000 per day may be assessed for each violation of the Solid Waste Laws, Regulations, Conditions of a Permit, or Order under Article 9 of Chapter 130A of the N.C. General Statutes. Further, the facility and/or all responsible parties may be subject to enforcement actions including penalties, injunction from operation of a solid waste management facility or a solid waste collection service and any such further relief as may be necessary to achieve compliance with the North Carolina Solid Waste Management Act and Rules.

ADDITIONAL COMMENTS

1. The facility is permitted to receive the following waste generated at the facility: gypsum, clarifier sludge, fly ash, bottom ash, construction and demolition debris, mill rejects (pyrites), limestone material, land clearing and inert debris, boiler slag, ball mill rejects, sand blast material, and coal waste. The facility is also permitted to receive Duke Energy Carolinas-generated asbestos, Allen Steam Station (Allen)-generated gypsum and clarifier sludge, and, Cliffside Steam Station-generated gypsum and clarifier sludge.

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 3 of 5

2. The facility has contracted with Charah, Inc. to conduct landfilling operations.
3. Signage was posted at the entrance to the facility in accordance with the approved operations plan.
4. The access road to the site was of all-weather construction and maintained in good condition. Since the previous inspection a truck wash station had been installed to clean trucks exiting the site.
5. Edge-of-waste markers delineating the permitted disposal area were visible and maintained in good condition. The markers are offset from the edge of the landfill liner. It was stated that the markers will be re-labeled to indicate the distance from the liner.
6. Landfill operations are currently ongoing in Phase I, Cell I.
7. While landfilling operations at the Industrial Landfill No. 1, Permit 18-12 are temporarily ceased, those wastes are being placed in the FGD landfill. The landfills are permitted to receive the same waste types.
8. Asbestos waste was placed in a designated area away from the working face with signage clearly marking the disposal area with a statement "Asbestos Waste Only". The disposal area was covered by earthen material (soil) and compacted as required; no asbestos waste was visible. The asbestos area was maintained at a distance greater than 25 feet from exterior slopes.
9. Gypsum, ash, and mill rejects are placed at the active working face. Wastes at the working face appeared to be landfilled as required: in ten foot layers, spread in lifts no greater than 12 inches, working from upgradient to downgradient areas or as otherwise specified in the Operations Plan.
10. Clarifier sludge may also be placed at the active face and allowed to dry, mixed with ash or gypsum, and spread in thin lifts. High moisture content clarifier sludge is required to be placed no closer than 50 from the active face and spread in-place. At the time of the inspection all landfilled wastes appeared to be spread and compacted as required.
11. All wastes were placed in the smallest working face practicable in the center of the operational area in accordance with the approved Operations Plan. No wastes were placed within 25 feet of the exterior slopes.
12. Field and laboratory testing data of in-place density and moisture content was requested and provided post inspection [March 18, 2014 and March 20, 2014]. Monthly field tests and laboratory tests were performed by ESP Associates, P.A. to monitor the compaction and moisture conditioning during waste placement of gypsum and fly ash. Test reports reviewed for the period of September, 2013, October, 2013 and December, 2013 through February, 2014. Four to eight field tests were performed during each monthly testing event at existing elevations at varied locations throughout the landfill. The gypsum and fly ash was reported to be compacted at the test locations equaling or exceeding a minimum 95 percent of its maximum dry density. Monthly reports summarizing testing and waste placement activities were provided to the facility by Charah, Inc. and reviewed for the period of September, 2013 through February, 2014. Those reports each month and stated that waste placement was in compliance with moisture and compaction requirements. Currently tonnages are provided in monthly activity reporting which must then be converted to cubic yards. The conversion of tonnages to cubic yards confirmed that the frequency of testing was conducted as required.
13. There was a small pile of construction waste present within the landfill. This waste was recently generated from the construction of new chimney drains within the landfill footprint during the week of the inspection. There were no other C&D wastes observed.
14. No wastes were placed in areas of accumulated water and no water was observed ponded over waste.
15. Leachate Management: Leachate is transmitted via the collection system to the lined stormwater storage basin located within the permitted landfill footprint. Leachate and stormwater are routed to the Marshall Ash Basin (wet). Three new chimney drains had been recently installed in the center of the landfill to convey leachate to the sump in the stormwater storage basin. At the time of the inspection the drains were connected to the sump and the capping of the connection at the riser at the sump was not yet completed. The silt fence installed around the sump. The need to continue maintenance of the silt fence during construction was discussed with facility staff.
16. The lined stormwater storage basin within the footprint of the landfill appeared to be maintained below the level limit of the basin. There were some rills on operational lifts slopes located at the interior side of the basin. Please ensure that waste cleaned out of the basin during maintenance and construction is allowed to dry to meet compaction and moisture content requirements prior to placement at the active working face and continue to work to divert surface water from the working face by means of berms or other measures.
17. Leachate collection system pipes were in the process of being cleaned out with camera monitoring on 3/7/2014. The previous clean-out and camera work was performed on 10/18/2012 and 10/19/2012 (no defects

FACILITY COMPLIANCE INSPECTION REPORT
Division of Waste Management
Solid Waste Section

Page 4 of 5

were noted). Cleaning and camera work was not performed in 2013. The Operations Plan states that "LCS pipes will be cleaned out by the use of a clean-out snake or high-pressure water flushing at least once a year, and the LCS piping will remote-camera monitored if cleaning indicates a blockage in the leachate collection system pipes." Please forward copy of report of clean-out and camera work. See *Observed Violations* section of this report.

18. Dust was well controlled at the time of the inspection. Dust control monitoring logs were reviewed on 3/7/2014 for compliance with the approved Dust Control Plan. Daily dust control logs were maintained and documented measures taken to control dust as required. Dust control log forms were recently updated to provide additional detailed reporting.
19. Exterior landfill slopes were vegetated except that the northern slopes on the northwestern were recently graded in preparation for scheduled re-seeding. There was no erosion observed on exterior landfill slopes.
20. Weekly logs (reviewed 3/7/2014) were maintained documenting monitoring and maintenance of stormwater conveyance systems and erosion and sedimentation controls.
21. Environmental monitoring records were reviewed on 3/7/2014. Semi-annual sampling of groundwater, surface water, and leachate was conducted in March, 2013 and September [Monitoring wells MS-8, MS-9, MS-10, MS-11, MS-12, MS-13, MS-14, MS-15, MS-16, Surface Water sampling point SW-1, and Leachate sampling point C1]. An inspection of all monitoring points was conducted on June 19, 2014 and summarized is summarized in a report of the inspection.
22. The Permit and Operations Plan were maintained on-site as required.
23. Training records were documented and maintained on-site. The following facility staff completed operator and/or manager training as required by Permit Condition Number 13:
 - Buddy Mayberry, expires 4/26/2015
 - George Tolbert, expires 5/19/2016
 - Scott Parks, expires 5/19/2016
 - Sherrie Christopher, expires 5/19/2016
 - Chris Lewis – Charah, Inc., expires 7/23/2016
 - Jenson Shults – Charah, Inc., expires 7/23/2016
 - Chris Emory– Charah, Inc., expires 7/23/2016
 - Steven Faussete– Charah, Inc., 10/24/2014.
24. The facility annual report was received on July 26, 2013. A total of 39,329.82 tons of waste were placed in the landfill during FY 2012-2013.
25. An annual volume survey was conducted on 5/7/2013. A total of 336,001.56 tons of capacity was reported used as of the survey date.

Please contact me if you have any questions or concerns regarding this inspection report.



Deborah Aja
Environmental Senior Specialist
Regional Representative
deborah.aja@ncdenr.gov

Phone: 828-296-4702
Asheville Regional Office
2090 US Hwy 70
Swannanoa, NC 28778

Sent on March 24, 2014, to:	X	Email	Hand delivery	US Mail	Certified No.
George Tolbert, Duke Energy Carolinas, LLC					
by;					

EC: Jason Watkins, Western District Supervisor
Sarah Rice, Compliance Officer
Larry Frost, Regional Permitting Engineer
Kimberlee Hutchinson, PE – Duke Energy Environmental Services